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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,560	08/31/2001	Mitsuyoshi Iwasaki	213007US2	7606
22850	7590	12/14/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			NGUYEN, HANH N	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	
			2662	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,560

Applicant(s)

IWASAKI ET AL.

Examiner

Hanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,10-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 4,6-9,13 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/25/02&11/02/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 10 and 14 are rejected under 35 USC 103(a) as being unpatentable over Hvostov et al. (pub. No. US2003/0,039,211 A1) in view of Admitted prior art.

In claims 1, 5, 10 and 14, Hvostov et al. discloses a first optical network system comprising: a node 12 (an optical line termination) and a plurality of ONUs 14 (optical network units). See Fig.1, page 1, paragraph 0016. The node 12 (OLT) comprises a bandwidth allocation server 26 (bandwidth control means) that assigns a predetermined transmission bandwidth, traffic flows (bandwidth path) to each of said plurality of ONUs 14, and accepts a bandwidth change of the transmission bandwidth. (See page 2, paragraphs 0019 & 0020 & 0031). Grant bandwidth is transmitted to ONUs with service ID that identifies a particular ONU (Bandwidth control means grants identified ONUs bandwidth in the optical network). See page 2, paragraph 0025 & page 3, paragraph 0043). Hvostov et al. does not disclose a second optical network, bandwidth control means apportioning ONUs between the first Optical network and the second optical network. The Admitted prior art in Fig.13, page 4, line 22 to page 5, line 5 discloses a first optical network comprising OLT 1A and ONUs 2-1a-2-na and; a second optical network comprising an OLT 1B and ONUs 2-1b-2-nb (a second optical network). The first optical network is used as working network while the second optical network is used as protection

network (apportioning ONUs between the first Optical network and the second optical network). Therefore, it would have been obvious to one ordinary skill in the art to combine the the admitted prior art teaching with the Hvostov 's optical network by using the bandwidth server 26 to allocate bandwidth to every ONU based on contract agreement, apportion ONUs to each optical network. The motivation is to reserve bandwidth for future use if the ONUs request more bandwidth which will be assigned and reduce bandwidth if the ONUs do not need these bandwidth.

In claims 5 and 14, Hvostov et al. discloses the grant bandwidth comprises minimum traffic rates (assign minimum cell rates). See page 2, paragraph 0024).

Claims 2, 3, 11 and 12 are rejected under 35 USC 103(a) as being unpatentable over Hvostov et al. (pub. No. US2003/0,039,211 A1) in view of Admitted prior art, and further in view of Foltzer (pat. 6567579 B2).

In claims 2, 3, 11 and 12, Hvostov et al does not disclose when a failure occurs in ONUs / paths of said first optical network and said second optical network, said bandwidth control means assigns all transmission bandwidths of said ONUS to the other optical network. Foltzer discloses, in Fig.5, the host digital terminal switches downstream transmissions from one set of optical paths to another when there is a failure of quality in one of the optical paths. See col.7, lines 15-35. Therefore, it would have been obvious to one ordinary skill in the art to apply the optical path switching of Foltzer into Hvostov et al. so that the bandwidth server can save bandwidth from failure ONUs/paths to the other ONUs to maximize the bandwidth allocation.

Allowable Subject Matter

Claims 4, 13, 6-9 and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claims 4 and 13, the prior art does not disclose when apportionment balance is lost of said plurality of ONUS between said first optical network and said second optical network, said bandwidth control means carries out apportionment of said plurality of ONUs between said first optical network and said second optical networkz again.

In claims 6 and 15, the prior art does not disclose said bandwidth control means apportions each of said plurality of ONUS to one of said first optical network and said second optical network such that a sum total of minimum cell rates of said ONUS in said first optical network becomes nearly equal to a sum total of minimum cell rates of said ONUS in said second optical network.

In claims 7 and 16, the prior art does not disclose said bandwidth control means apportions each of said plurality of ONUs to one of said first optical network and said second optical network such that a sum total of peak cell rates of said ONUS in said first optical network becomes nearly equal to a sum total of peak cell rates of said ONUs in said second optical network.

In claims 8 and 17, the prior art does not disclose said bandwidth control means apportions each of said plurality of ONUS to one of said first optical network and said

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second optical network such that a sum total of differences between peak cell rates and minimum cell rates of said ONUS in said first optical network becomes nearly equal to a sum total of differences between peak cell rates and minimum cell rates of said ONUS in said second optical network.

In claims 9 and 18, the prior art does not disclose said bandwidth control means apportions each of said plurality of ONUS to one of said first optical network and said second optical network such that a sum total of established bandwidths of said ONUs in said first optical network becomes nearly equal to a sum total of established bandwidths of said ONUs in said second optical network.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakaishi (Pat. 6,757,251 B1) discloses Optical Line Terminal , passive Optical network System and method of Dynamically Controlling an Upstream Band.

Quale (Pat. 6,317,234 B1) discloses Communication Network.

Matsunaga et al. (pat. 6,434,164 B1) discloses Multiple Access Communication System capable of Measuring and guaranteeing a service quality Supplied for each service permitted to subscriber Stations.

Nishikawa et al. (Pat. 6,658,457 B2) discloses Device and method for Interconnecting Distant Networks through Dynamically Allocated bandwidth.

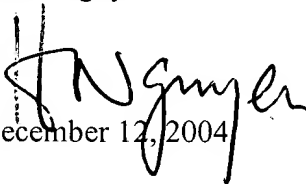
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen


December 12, 2004